



ORDER NO. ARP1535

MULTI - PLAY COMPACT DISC PLAYER

# PD-N500 HEM, HB, SD, SD/G, HP PD-N400 HEM, SD, HP

Refer to the service manual ARP1520, PD-M500/KU, KC,
 PD-M400/KU and KC types.

●This manual is applicable to the PD-M500/HEM, HB, SD, SD/G, HP, PD-M400/HEM, SD and HP types.

# 1. PD-M500/HEM, HB, SD, SD/G AND HP TYPES

#### NOTES :

- Parts without part number cannot be supplied.
- Parts marked by "©" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- ●The A mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- •For your parts Stock Control, the fast moving items are indicated with the marks★★ and ★. ★★ GENERALLY MOVES FASTER THAN★
- This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.
- Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

#### 1.1 CONTRAST OF MISCELLANEOUS PARTS

The PD-M500/HEM, HB, SD, SD/G and HP types are the same as the PD-M500/KU type with the exception of the following sections.

Mark	Symbol & Description	Part No. Description						
IVIARK	Symbol & Description	KU type	HEM type	HB type	SD type	SD/G type	HP type	Remarks
Δ <b>(</b>	Headphone board assembly	PWZ1393 PTT1058	PWZ1396 Non supply					
▲ 🛈			PTT1059	PTT1059			PTT1059	
Δ ★	Power transformer (AC110/120 - 127/220/240V)				PTT1060	PTT1060		
Δ	Strain relief	CM-22C	CM-22B	CM - 22B	CM-22B	CM-22B	CM-22B	
	Phono name plate	PAM1203	PAM1188	PAM1188	PAM1188	PAM1188	PAM1188	
	FL filter	PAM1234	PAM1235	PAM1235	PAM1234	PAM1234	PAM1235	
Δ	AC power cord	PDG1002 (PDG1015)	PDG1003	PDG1004	PDG1013	PDG1013	PDG1006	
	CD packing case	PHG1177	PHG1187	PHG1187	PHG1187	PHG1231	PHG1187	For packing
	Front panel	PNW1383	PNW1361	PNW1361	PNW1361	PNW1361	PNW1361	
	Headphone knob		PAC1208	PAC1208	PAC1208	PAC1208	PAC1208	
	Headphone angle		Non supply					
	Operating instructions (English)	PRB1047		PRB1047	PRB1047	PRB1047	PRB1047	
	Operating instructions (English/French)		PRE1067					
	Operating instructions (Spanish)			• • •	PRC1005			
	Operating instructions (German/Italian/Dutch/Spanish/Swedish/Portuguese)	• • • •	PRF1008					
Δ Δ <b>★</b> ★	Single magazine assembly Lead wire unit S102 Voltage selector (AC110/120 - 127/220/240V)	PXA1043 PDF1035	PDF1035	PDF1035	PDF1042 PSB1002	PDF1042 PSB1002	PDF1035	

# MAIN Board Assembly (PWZ1396)

The main board assembly (PWZ1396) is the same as the main board assembly (PWZ1393) with the exception of the following sections.

		Part	Dl	
Mark	Symbol & Description	PWZ1393	PWZ1396	Remarks
Δ★★	IC30 - IC32 R89,R90 R91,R92 R105,R106	RD1/6PM102J	ICP-N10 RD1/6PM511J RD1/6PM223J RD1/6PM511J	

## Headphone Board Assembly

SEMICONDUCTO	R	R	₹
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Mark Symbol & Description Part No.

★★ IC501 M5218L

**CAPACITORS** 

Mark Symbol & Description Part No.

C501,C502 CEAS330M16 C503 – C505 CKCYF103Z50 C506,C507 CQMA104K50

**RESISTORS** 

Mark Symbol & Description Part No.

VR501 Variable resistor (20kΩ) PCS1001

(LEVEL)

Other resistors RD1/6PM \( \square\) I

**OTHERS** 

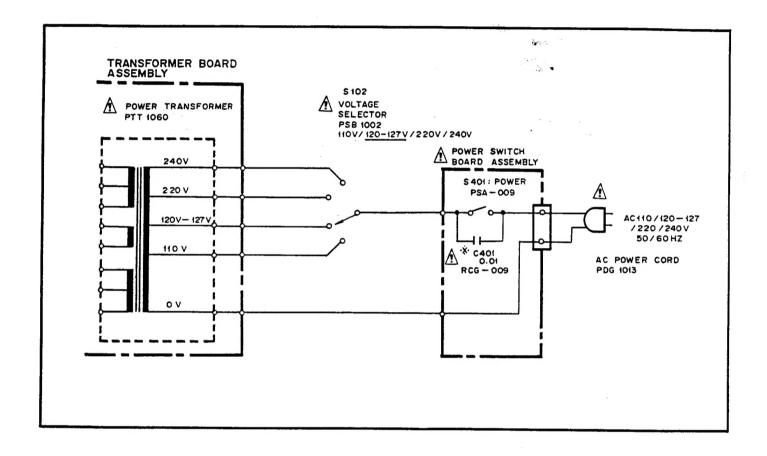
Mark Symbol & Description Part No.

JA501 Jack (PHONES) PKN1001

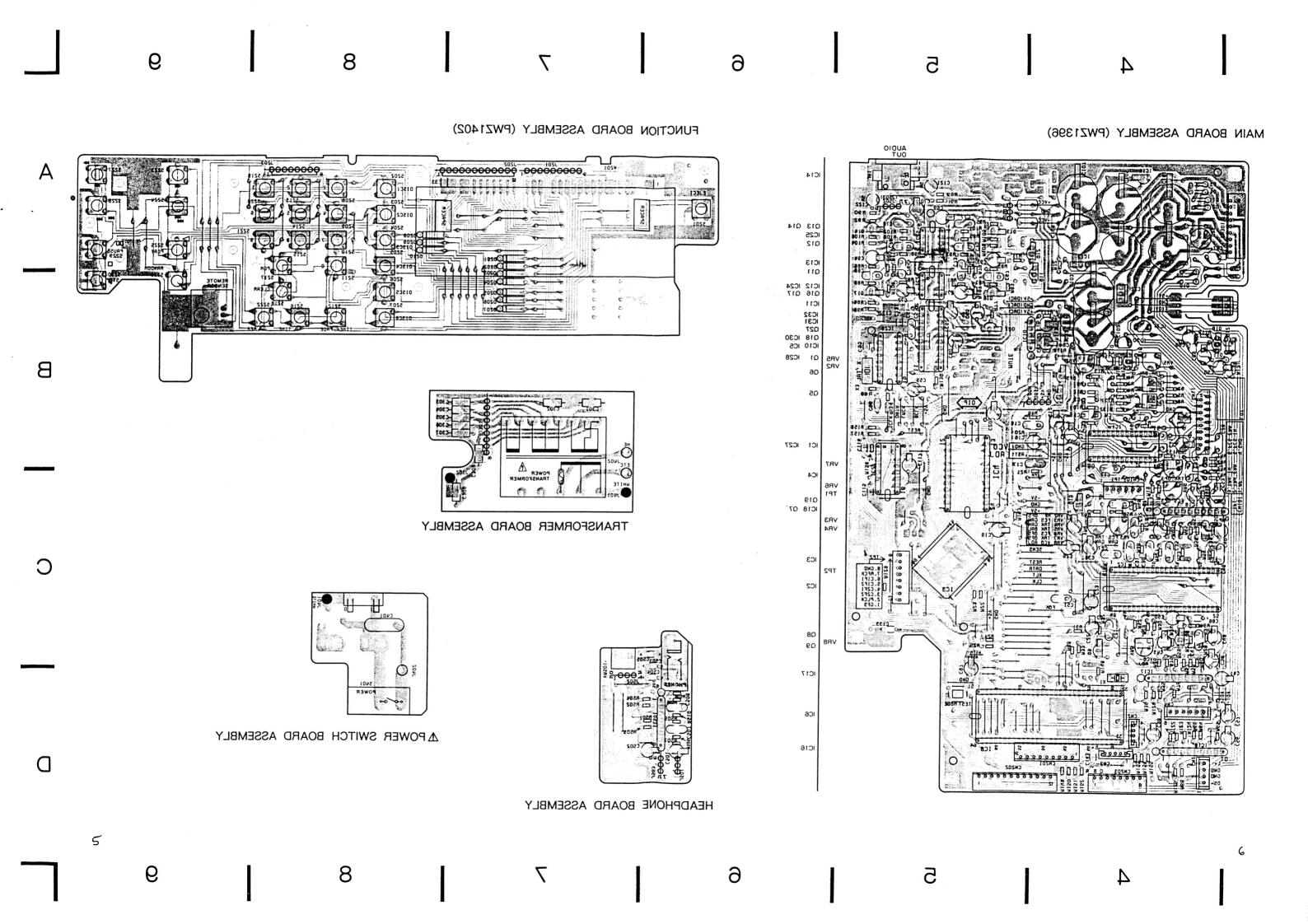
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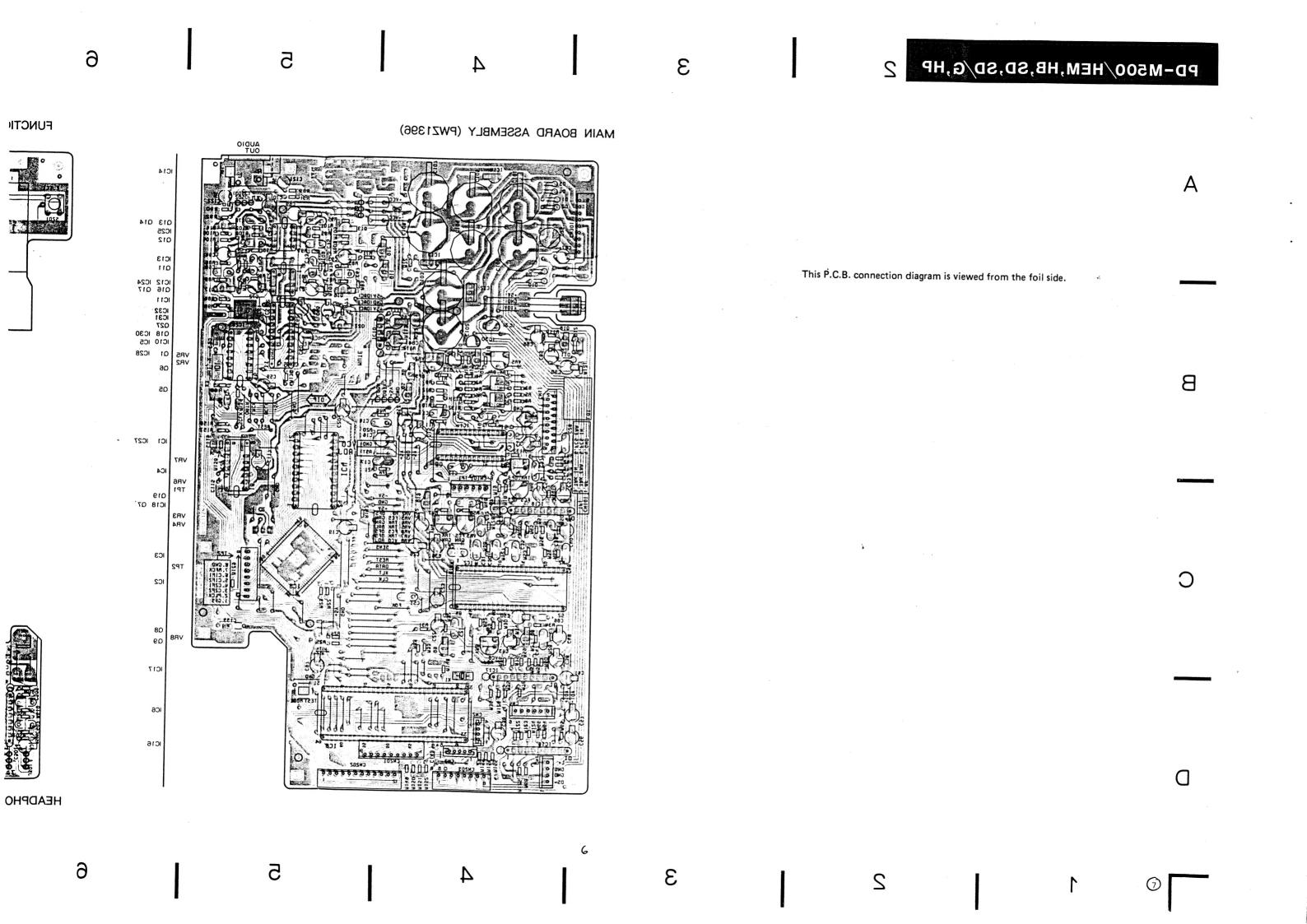
# 1.2 FOR PD-M500/SD and SD/G types

Note: The schematic diagram of PD-M500/SD and SD/G types are the same as the PD-M500/HEM, HB and HP types with the exception of the power supply section. Refer to the schematic diagram of PD-M500/HEM, HB and HP types. (see page 11.)



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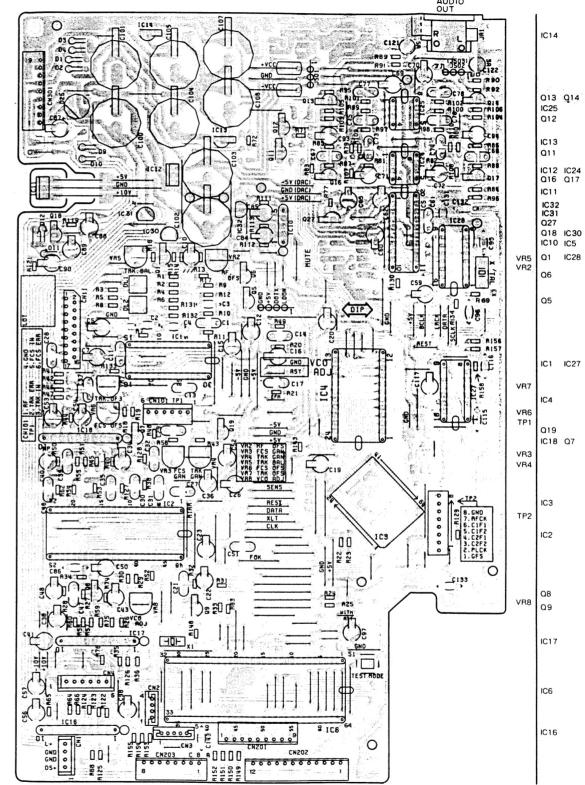
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# 1.3 P.C. BOARDS PATTERN

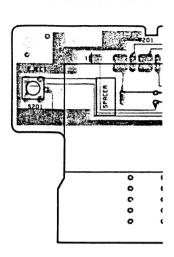
P.C.B. pattern diagram indication	Corresponding part symbol	Part name	P.C.B. pattern diagram indication	Corresponding part symbol	Part name
	r⊗n r⊗n		ίΞ,		Ceramic capacitor
Ĺ		Transistor		•—I—•	Mylar capacitor
D S G		FET	g( )	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Church associates
o⋈			SF		Styrol capacitor
	<b>──</b>	Diode	dy O	<b>○</b> ₩ • •	Electrolytic capacitor (Non polarized)
0 <del>11</del>			Z P		Electrolytic capacitor (Noiseless)
a <u>f</u>	<b>→</b>	Zenner diode		<u>~ ∜</u> +	Electrolytic capacitor (Polarized)
74-	~	LED	(A)		Electrolytic capacitor (Polarized)
	<b>─</b>	Varactor		<b>⊶</b>   •	Power capacitor
<u>                                     </u>		Tact switch			Semi-fixed resistor
		Inductor			Resistor array
	<i>□</i>	mactor		o—∕M∕—∘	Resistor
0	~ <b>~~</b> ~	Coil	~		nesistor
- 13 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Transformer	HOF	⊶□	Resonator
8 1		Filter			

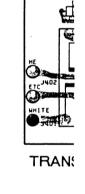
- 1. This P.C.B. connection diagram is viewed from the parts mounted side.
- 2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the above Table.
- The capacitor terminal marked with shows negative terminal.
   The diode marked with O shows cathode side.
- 5. The transistor terminal marked with \_\_\_\_ shows emitter.

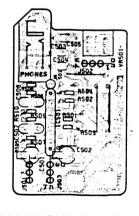
MAIN BOARD ASSEMBLY (PWZ1396)



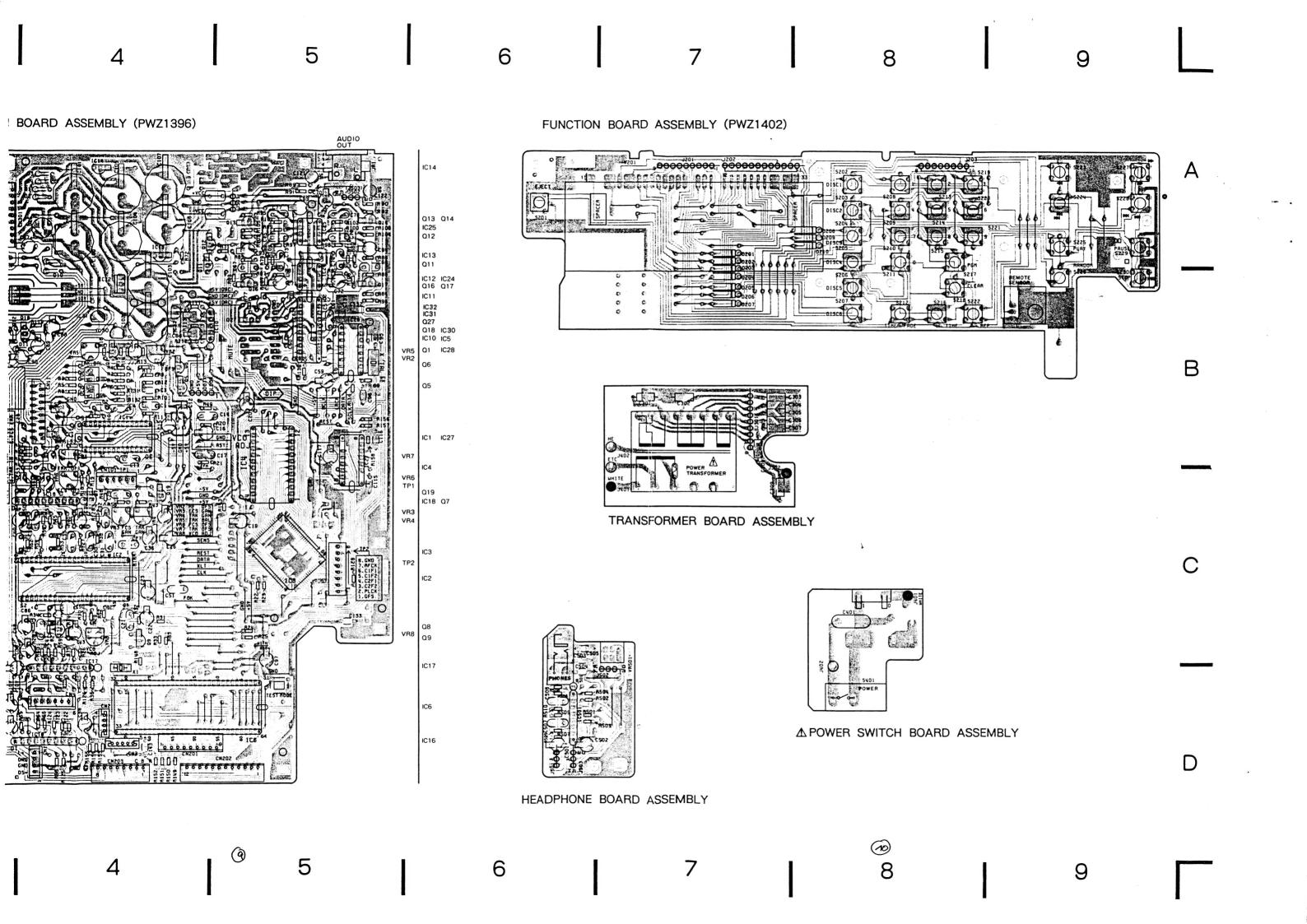
FUNCTION BOARI

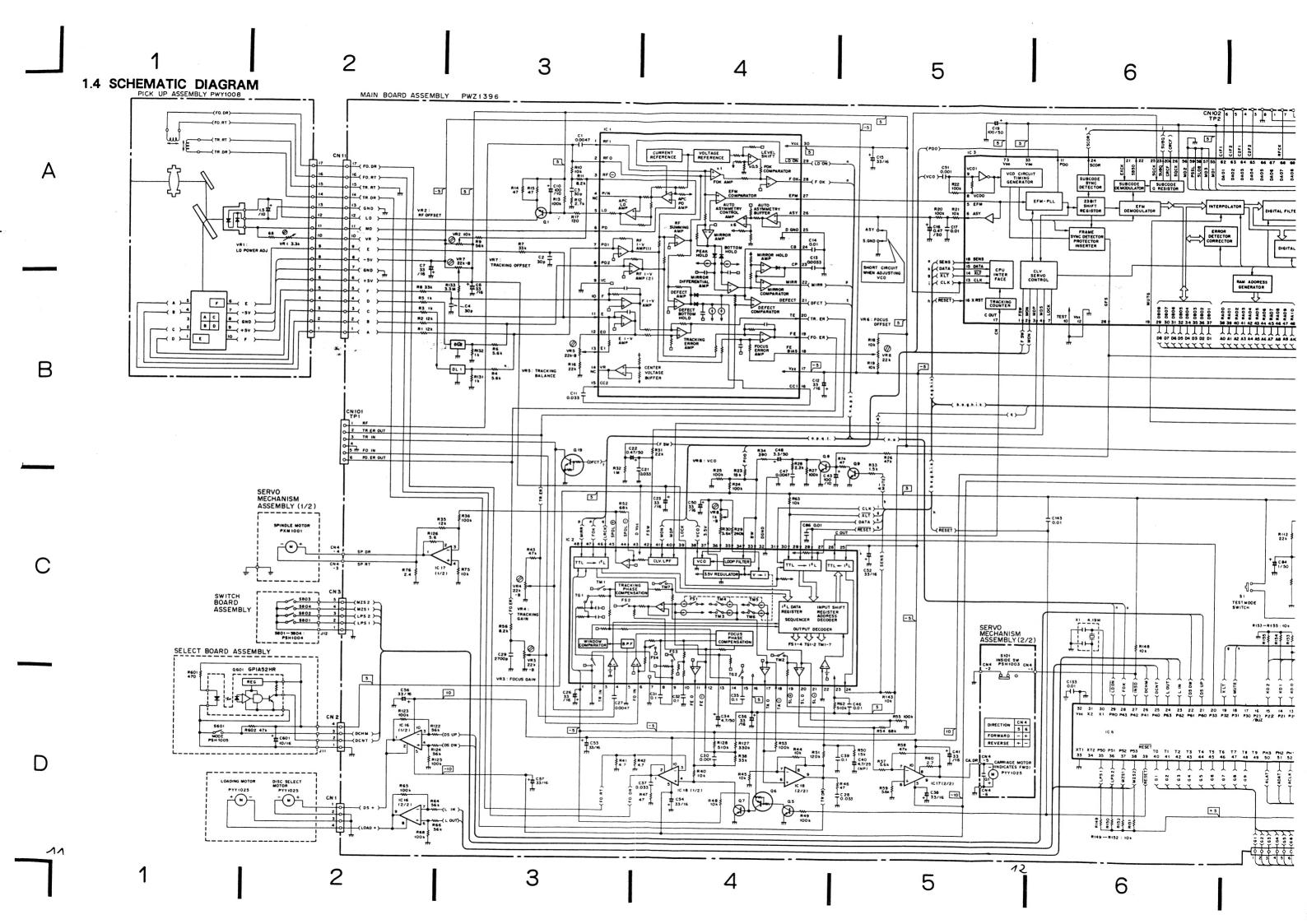


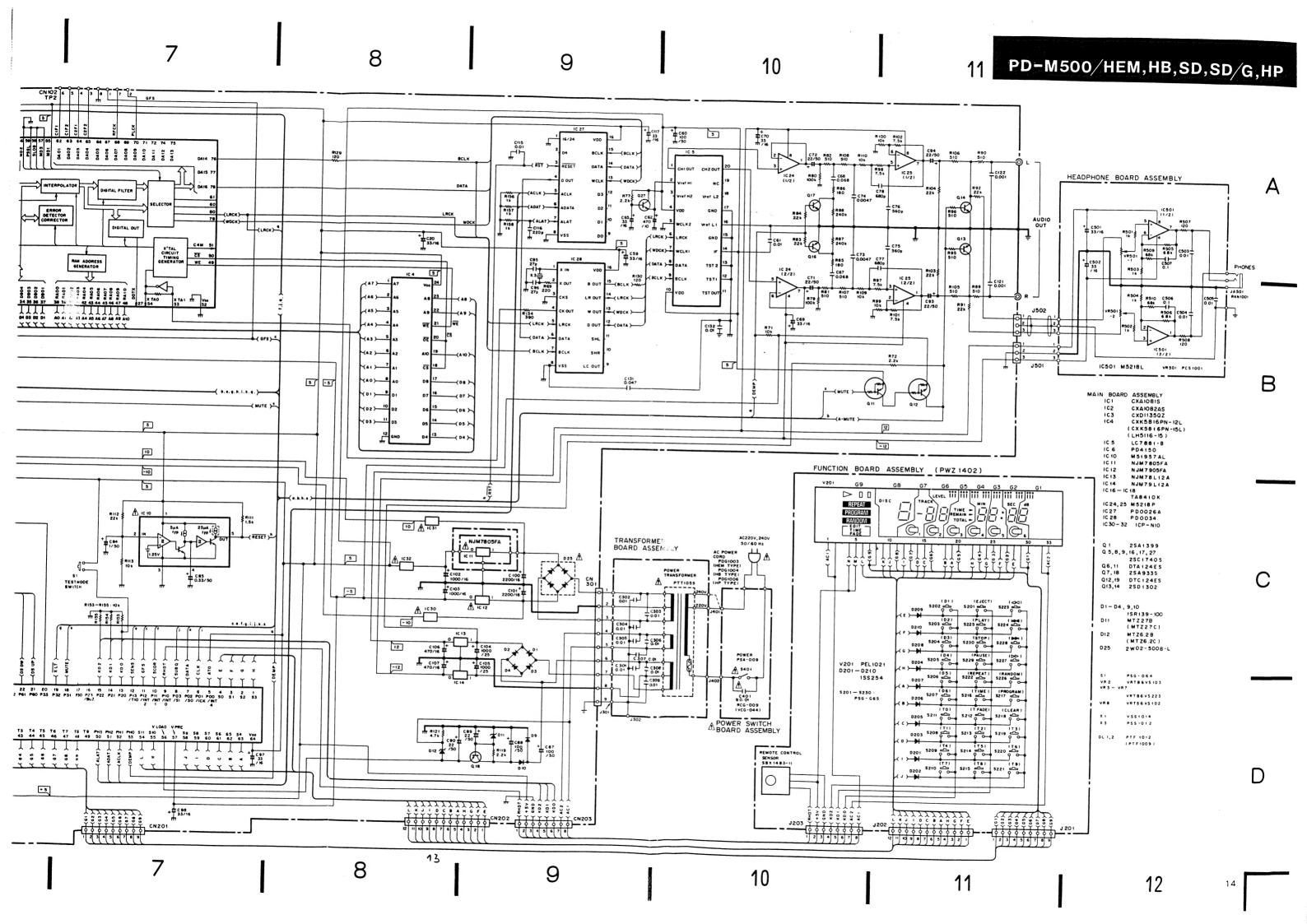




HEADPHONE BOARD







## PD-101500/ HEIVI, HB, SD, SD/ G, HP PD-M400/ HEM, SD, HP

1. RESISTORS:

Indicated in  $\Omega$ , 1/4W, 1/6W and 1/8W,  $\pm 5\%$  tolerance unless otherwise noted k; k $\Omega$ , M; M $\Omega$ , (F);  $\pm 1\%$ , (G);  $\pm 2\%$ , (K);  $\pm 10\%$ , (M);  $\pm 20\%$  tolerance.

2. CAPACITORS:

Indicated in capacity ( $\mu$ F) /voltage (V) unless otherwise noted p; pF. Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE, CURRENT:

; DC voltage (V) at no input signal.

4. OTHERS:

→ ; Signal route.

②: Adjusting point.

The  $\triangle$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation. % marked capacitors and resistors have parts numbers.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

5. SWITCHES: (The underlined indicates the switch position)

OUTSIDE OF P.C.BOARD ASSEMBLY

S101 : INSIDE ON - OFF MAIN BOARD ASSEMBLY

S1 : TEST MODE ON - OFF

FUNCTION BOARD ASSEMBLY

S201: EJECT

S202 : 1 S203 : 2

\$204 : 3 (DISC NO.)

S205:4

S206:5

S207:6.

S208 : 1

S209:4 (TRACK NO.)

S210:7

S211:0,

S212: TIME FADE

S213 : 2 ]

\$214:5 (TRACK NO.)

S215:8

S216 : TIME

S217 : PGM MEMORY

S218 : CLEAR

S219:3]

S220:6 (TRACK NO.)

S221:9 J

S222: REPEAT

S223 : MANUAL SEARCH (

\$224 : TRACK SEARCH ( )

S225 : PLAY

S226: RANDOM PLAY

S227 : MANUAL SEARCH (►►)

S228 : TRACK SEARCH (►► )

S229 : PAUSE

S230 : STOP

SWITCH BOARD ASSEMBLY

S801 : LPS1 LOADING POSITION

S802 : LPS2

	STOP	DURING THE LOADING	CLAMP CONDITION PLAY	DURING THE EJECT
S801	ON (H)	OFF (L)	OFF (L)	ON (H)
S802	ON (H)	ON (H)	OFF (L)	OFF (L)

S803 : MZS2 MAGAZINE

S804 : MZS2 MAGAZ

	NO MAGAZINE	SIX MAGAZINES	SINGLE
S803	ON	OFF	OFF
	(H)	(L)	(L)
S804	OFF	ON	OFF
	(L)	(H)	(L)

#### Line Voltage Selection

#### (For HEM, HB and HP types)

Line voltage can be changed with following steps.

- 1. Disconnect the AC Power cord.
- 2. Remove the Bonnet case.
- 3. Change the connection of the primary lead wires. (Connect as shown in Schematic Diagram)
- 4. Stick the line voltage label on the rear panel.

Description	Part No.
220V label	AAX-193
240V label	AAX-192

# 2. FOR PD-M400/HEM, SD AND HP TYPES

#### NOTES

Parts without part number cannot be supplied.

- Parts marked by "O" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- ●The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- ●For your parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.

★★GENERALLY MOVES FASTER THAN★

This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

• When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

### 2.1 Contrast of Miscellaneous Parts

The PD-M400/HEM, SD and HP types are the same as the PD-M500/KU type with the exception of the following sections.

Mari	Symbol & Description	Symbol & Description PD-M500 /KU type		PD-M400 /SD type	PD-M400 /HP type	Remarks
Δ @		PWZ1393 PWZ1402	PWZ1398 PWZ1408	PWZ1397 PWZ1408	PWZ1397 PWZ1408	
Δ +		Non supply PTT1058	Non supply	Non supply	Non supply	
	(AC220/240V)	1111000	PTT1069		PTT1069	
	(AC110/120 - 127/220/240V)	• • • •	• • • • •	PTT1070	1111009	
Δ	Strain relief	CM-22C	CM-22B	CM - 22B	CM - 22B	
	Track button	PAC1261				
	Program button		PAC1263	PAC1263	PAC1263	
	Window	PAM1182	PAM1202	PAM1183	PAM1183	
	FL filter	PAM1234	PAM1237	PAM1236	PAM1236	
Δ	AC power cord	PDG1002	PDG1008	RDG1003	PDG1011	
	CD packing case	PHG1177	PHG1189	PHG1189	PHG1189	For packing
	Operating instructions (English)	PRB1047		PRB1048	PRB1048	
	Operating instructions (English/French)		PRE1068			
	Operating instructions (Spanish)			PRC1005		
	Operating instructions (German/Italian/Dutch/ Spanish/Swedish/Portuguese)	• • • •	PRF1009	• • • •	• • • •	
	Phono name plate	PAM1203	PAM1189	PAM1189	PAM1189	
	Connection cord with miniplug		PDE-319	PDE-319	PDE-319	
	Stopper	PNM1018				
	Leg (A)	PNW1326				1
	Front panel	PNW1383	PNW1362	PNW1362	PNW1362	
	Remote control unit	PWW1021		• • • •		
	Single magazine assembly	PXA1043				
	Leg		REC-434	REC - 434	REC - 434	
	Screw	PMZ30P060FCU	PMZ30P060FMC	PMZ30P060FMC	PMZ30P060FMC	For power switch
	Lead wire unit	PDF1035	PDF1035	PDF1042	PDF1035	SWITCH
Δ★★	S102 Voltage selector (AC110/120 - 127/220/240V)			PSB1002		

MAIN Board Assembly (PWZ1397 and PWZ1398)
The main board assembly (PWZ1397) and (PWZ1398) are the same as the main board assemble (PWZ1393) with the exception of the following sections.

			Part No.					
Mark	Symbol & Description	PWZ1393	PWZ1397	PWZ1398	Remar			
**	IC5	LC7881-B	LC7881-C	LC7881 - C				
** **	IC13	NJM78L12A						
**	IC14	NJM79L12A						
**	IC27	PD0026A	• • • •	nnoo24				
**	IC28	PD0034		PD0034				
A . A A .	IC30 - IC32			ICP-N10				
∆★★ ∆★★	IC11	NJM7805FA	NJM78M05FA	NJM78M05FA				
$\Delta \star \star$	IC12	NJM7905FA	NJM79M05FA	NJM79M05FA				
	IC24,IC25	M5218P	NJM4558DX	NJM4558DX				
**	Q27	2SC1740S		• • • •				
-AA-	Q18	2SA933S						
**	D1 - D4.D9	1SR139-100			1			
*	D11	MTZ27B		• • • •				
^		(MTZ27C)			l			
*	D12	MTZ6.2B						
		(MTZ6.2C)		A	l			
	D17 - D10		1SS254	1SS254				
*	D17 - D19 D25	2W02-5008-L	WL02-5004-L	WL02-5004-L	l			
*	C59	CEAS330M16	* * * * *	CEAS330M16	1			
	C61	CFTXA103J50	CKCYF103Z50	CKCYF103Z50				
	C62	CEAS471M10	CEAS101M10	CEAS471M10				
			CCCCTTOOTEO					
	C81,C82	CEAS101M50	CCCCH300J50 CEAS330M16	CEAS330M16				
	C19,C60	CEAS300M16	CEASSOWIG	CLASSONIIC	l			
	C65 C87	CEASIOIM50						
	C89,C90	CEAS220M50			I			
	C91,C141		CKCYF103Z50	CKCYF103Z50	1			
	C92	0000000000	CCCSL101J50	CCCSL101J50	1			
	C95,C96	CCCCH270J50		CCCCH270J50				
	C104,C105	CEAS102M25			1			
	C106,C107	CEAS471M16						
	C115,C162	CKCYF103Z50						
	C116	CCCSL221J50	• • • • •		1			
	C118		CEAS220M50	CEAS220M50				
	C75,C76	CQMA561J50	CQMA471J50	CQMA471J50	1			
	C77,C78	CQMA681J50	CQMA821J50	CQMA821J50				
	C117	CEAS330M16						
	C121,C122	CQSA102J50	CQMA102K50	CQMA102K50				
	C131	CKCYF473Z50	CKCYF103Z50	CKCYF103Z50				
	C102,C103	CEAS102M16	CEAS471M10	CEAS471M10				
	R3,R5,R131,R132,R156 - R158	RD1/6PM102J						
	P60	PD1/601/2211		RD1/6PM221J				
	R69 R4,R6	RD1/6PM221J RD1/6PM562J	RD1/6PM123J	RD1/6PM123J				
	R72	RD1/6PM222J	RD1/6PM152J	RD1/6PM152J				
	R78	• • • • •	RD1/6PM471J	RD1/6PM271J				
	R77	RD1/6PM222J						
			DD1 /00045	DD1 (67) 50041				
	R117		RD1/6PM224J RD1/6PM102J	RD1/6PM224J				
	R118	RD1/6PM222J	RD1/6PM102J	RD1/6PM102J	1			
	R119 R121	RD1/6PM222J RD1/6PM472J	RD1/6PM362J	RD1/6PM362J				
	R97,R98	RD1/6PM752J	RD1/6PM822J	RD1/6PM822J				
	R101,R102	RD1/6PM752J	RD1/6PM472J	RD1/6PM472J				
	R109,R110	RD1/6PM103J	RD1/6PM822J	RD1/6PM822J	1			
	R130	RD1/6PM121J		RD1/6PM121J RD1/6PM391J				
	R134 R159	RD1/6PM391J	RD1/6PM362J	RD1/6PM362J				
	1109		1017 011410023	101,01111000				
	R161		RD1/6PM391J	RD1/6PM391J				
**	DL1,DL2 Delay line	PTF1012						
*	X2		PSS-012	700.010				
*	Х3	PSS-012		PSS-012				
	JA3,JA4 Mini jack	1	RKN1004	RKN1004				

# Function Board Assembly (PWZ1408)

The function board assembly (PWZ1408) is the same as the function board assembly (PWZ1402) with the exception of the following sections.

		Part		
Mark	Symbol & Description	PWZ1402	PWZ1408	Remarks
**	D201 - D203 S208 - S215,S219 - S221 Tact switch (TRACK No.0-9, TIME FADE, REPEAT) V201 Fluorescent indicator tube	1SS254 PSG-065 PEL1021	PEL1022	
	Remote control sensor	SBX1483-11	• • • •	

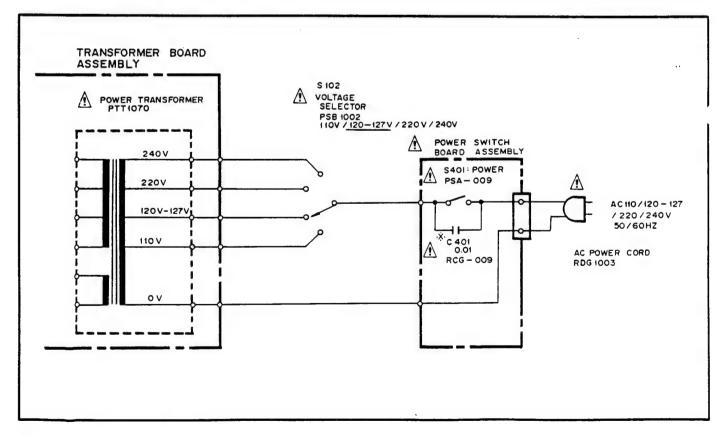
## Transformer Board Assembly

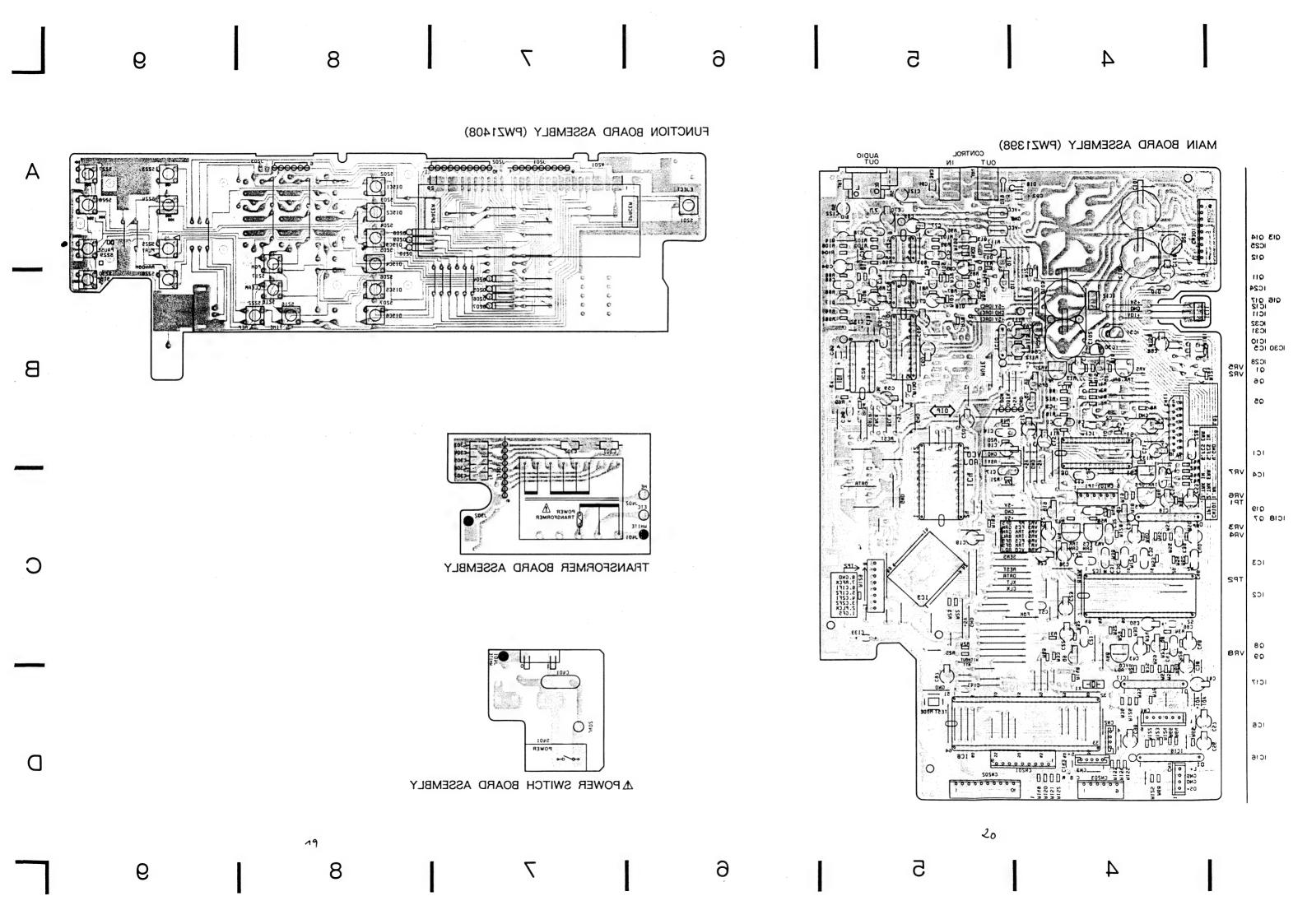
The transformer board assembly (for PD-M400/HEM, SD and HP types) are the same as the Transformer board assembly (for PD-M500/KU type) with the exception of the following sections.

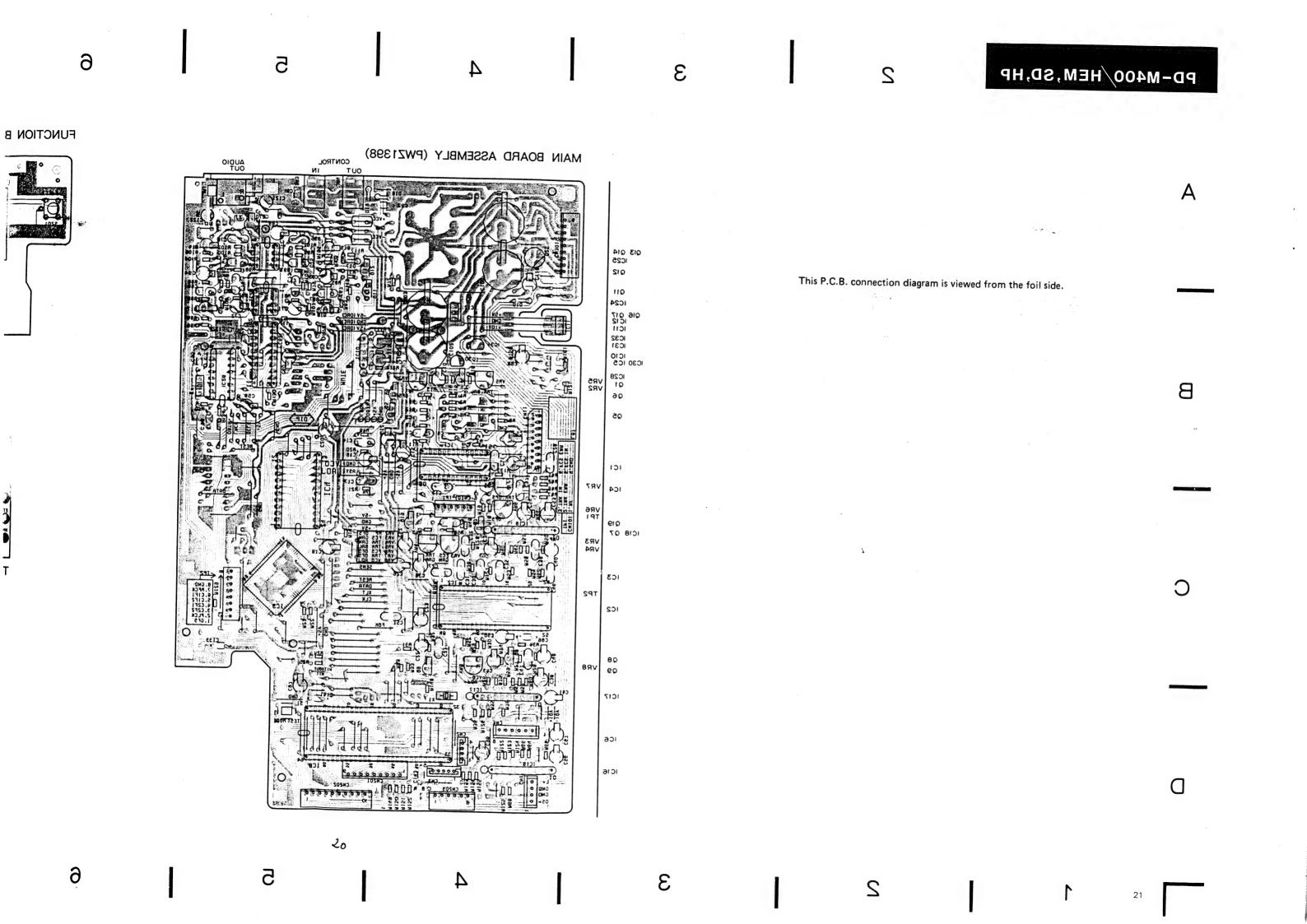
Mark	Symbol & Description	Part No.				
		PD-M500 /KU type	PD-M400 /HEM type	PD-M400 /SD type	PD-M400 /HP type	Remarks
	C308,C309	CKPYF103Z50	• • • • • •			

## 2.2 FOR PD-M400/SD TYPE

Note: The schematic diagram of PD-M400/SD type is the same as the PD-M400/KU and KC types with the exception of the power supply section. Refer to the service manual (ARP1520), PD-M500/KU, KC, PD-M400/KU and KC types.







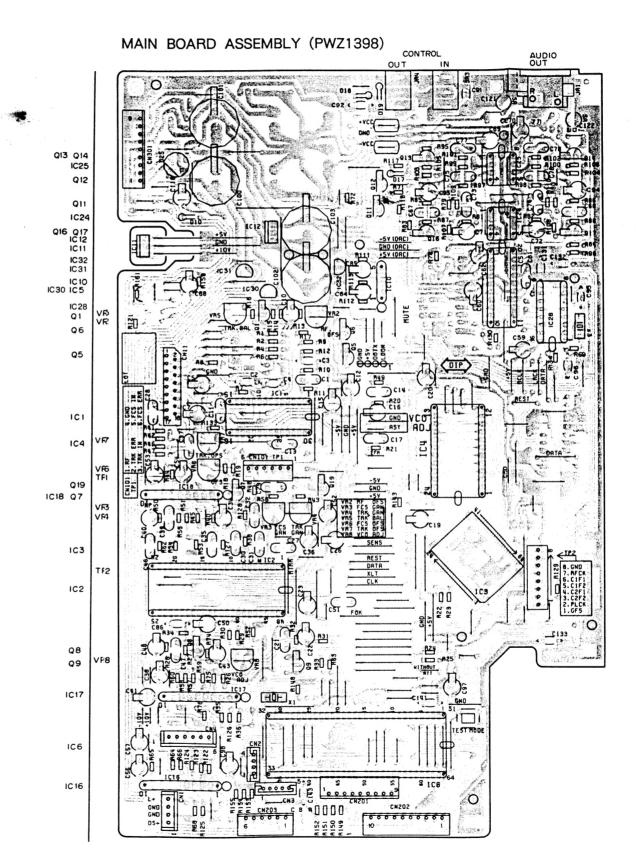
# 2.3 P.C. BOARDS PATTERN

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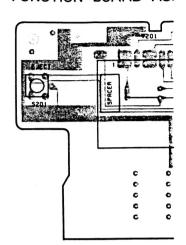
В

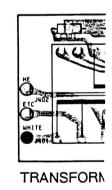
P.C.B. pattern diagram indication	Corresponding part symbol	Part name	P.C.B. pattern diagram indication	Corresponding part symbol	Part name	
B	$r\Omega$		( _ ,		Ceramic capacitor	
4_		Transistor	$\subset \supset$		0 11 0	Mylar capacitor
S S		FET	g( )	<b>○</b> —  —•		
ОM			Sr.		Styrol capacitor	
	<b>─</b>	Diode	d C	<b>○──</b> ₩──	Electrolytic capacitor (Non polarized)	
0 <del>14</del>			□ Z		Electrolytic capacitor (Noiseless)	
а́С	<b>→</b>	Zenner diode		<del>○     +</del>   •	Electrolytic capacitor (Polarized)	
<del>``</del>	~ <del>`</del>	LED	1		Electrolytic capacitor (Polarized)	
	<b>─</b>	Varactor		<b>←</b>   ∘	Power capacitor	
ı⊡ı		Tact switch		·	Semi-fixed resistor	
	. 000	Inductor			Resistor array	
	~ VV ~	inductor		. 444		
0	<i></i>	Coil	~	<b></b> ₩•	Resistor	
		Transformer	HDF	<b>⊶</b> □⊢⊸	Resonator	
		Filter				

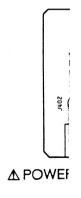
- 1. This P.C.B. connection diagram is viewed from the parts mounted side.
- The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the above Table.
- 3. The capacitor terminal marked with \_\_\_\_ shows negative terminal.
- 4. The diode marked with O shows cathode side.
- 5. The transistor terminal marked with \_\_\_\_ shows emitter



FUNCTION BOARD AS:







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